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EXAMINER

CANTELMO, GREGG

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 39

Application Number: 08/902,331
Filing Date: July 29, 1997
Appellant(s): GRUENENFELDER ET AL.

James F. McKeown
For Appellant

MAILED
MAY 06 2003
GROUP 1700

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 7, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 35, 37, 44 and 45 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

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(9) Prior Art of Record

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

(10) Grounds of Rejection

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 35-37 and 44-45 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The equation $0.2 r_1 \leq d_0 \leq 0.54 r_1$ is not disclosed in the original disclosure of the instant application, and the disclosure therein fails to clearly lead one of ordinary skill in the art to arrive at this relationship. However there is no support for such a critical limitation. Appellant relies on support and disclosure provided in the amendment and not clearly and sequentially disclosed within the original application in the same manner.
3. Claims 35-37 and 44-45 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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In light of submitted claim 44, this claim teaches of a relationship between the degree of taper and radius by manipulating numerous equations. The relationship defined as $0.2 r_1 \leq d_0 \leq 0.54 r_1$. However there is no support for such a critical limitation. Appellant relies on support and disclosure provided in the amendment and not clearly and sequentially disclosed within the original application in the same manner. At one point Appellant recites that a preferred distance a is 30% d_{113} . The skilled artisan would not have been led to such a preferred distance without the specific teachings of the new matter presented in Appellant's amendment to the specification.

Since this claimed limitation is a critical feature of the instant invention, the disclosure as recited in the original application is not enabling for the claimed relationship. The examiner has interpreted such a limitation such that by teaching of the same target dimensions, the target will inherently generate the same taper at some point during sputter operation. Furthermore, it would not have been clear to one having ordinary skill in the art to employ a target having an amount of taper defined by the relationship: $0.2 r_1 \leq d_0 \leq 0.54 r_1$ since the original specification fails to provide any teaching toward deriving such a critical feature.

Furthermore Appellant indicates an equation wherein $d_0 = d_{113} - a$ as shown in Fig. 1. Analysis of Fig. 1 does not show this relationship. First there is no clear disclosure of d_0 in the drawing. Second and more notably, examination of the figure may not show this relationship. It appears that the upper surface of the target and lower limit of distance a are separated by a gap or structure between the two components. The specification does not clearly set forth that the lower limit of distance a is directly

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adjacent to the upper surface of the target and Fig. 1, relied upon for this equation appears to show that the two components are not directly adjacent each other.

Therefore when determining the amount of taper the difference between d_{113} and a will give a value that is greater than d_0 since it will also include the gap between the upper target surface and a . For assistance in understanding the examiners position, an enlarged marked up copy of Fig. 1 was provided in the previous office action, incorporated herein.

(11) Response to Argument

Appellant argues that the Examiner has not made a reasonable basis to question the written description and/or enablement requirements of 35 USC § 112-1.

The Examiner respectfully disagrees.

As set forth in the rejections above and in the previous office action, the Examiner maintains that a reasonable basis to question the written description and/or enablement requirements of 35 USC § 112-1 has been established.

In particular and as stated above:

Appellant relies on support and disclosure provided in the amendment and not clearly and sequentially disclosed within the original application in the same manner. At one point Appellant recites that a preferred distance a is 30% d_{113} . The skilled artisan would not have been led to such a preferred distance to arrive at the specific equation set forth in claims 44 without the specific teachings of the new matter presented in Appellant's amendments to the application.

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Since this claimed limitation is a critical feature of the instant invention, the disclosure as recited in the original application is not enabling for the claimed relationship. Furthermore, it would not have been clear to one having ordinary skill in the art to employ a target having an amount of taper defined by the relationship: $0.2 r_1 \leq d_0 \leq 0.54 r_1$ since the original specification fails to provide any teaching toward deriving such a critical feature.

Furthermore Appellant indicates an equation wherein $d_0 = d_{113} - a$ as shown in Fig. 1. Analysis of Fig. 1 does not show this relationship. First there is no clear disclosure of d_0 in the drawing. Second and more notably, examination of the figure may not show this relationship. It appears that the upper surface of the target and lower limit of distance a are separated by a gap or structure between the two components. The specification does not clearly set forth that the lower limit of distance a is directly adjacent to the upper surface of the target and Fig. 1, relied upon for this equation appears to show that the two components are not directly adjacent each other. Therefore when determining the amount of taper the difference between d_{113} and a will give a value that is greater than d_0 since it will also include the gap between the upper target surface and a . For assistance in understanding the examiners position, an enlarged marked up copy of Fig. 1 was provided in the previous office action, incorporated herein.

For at least these reasons, the Examiner maintains that a reasonable basis to question the written description and/or enablement requirements of 35 USC § 112-1 has been established.

Appellant states that the Examiner has ignored the Haag Declaration.

The Examiner respectfully disagrees and as shown in the record is in fact an incorrect statement. For example See item 3 of paper No. 25 wherein the Examiner specifically identifies and recognizes the Declaration but explains within that office action why the Declaration is not persuasive, incorporated herein.

The Declaration establishes the final equation on the basis of arrangements which are not clearly set forth in the original disclosure such as $d_0 = d_{113} - a$. This equation is never specifically recited in the original disclosure and as shown in the declaration is provided to determine the degree of taper of the target. However, as the Examiner has maintained, this relationship does not represent the degree of taper of the target since it appears that the upper surface of the target and lower limit of distance a are separated by a gap or structure between the two components. The specification does not clearly set forth that the lower limit of distance a is directly adjacent to the upper surface of the target and Fig. 1, relied upon for this equation appears to show that the two components are not directly adjacent each other. Therefore when determining the amount of taper the difference between d_{113} and a will give a value that is greater than d_0 since it will also include the gap between the upper target surface and a .

Thus because the Declaration appears to be derived from teachings beyond the scope of the original disclosure of the instant application, it has not been held to be persuasive.

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Therefore not only is Appellants statement that the Examiner must ignore the Declaration not an accurate statement, but further given that the declaration relies on relationships beyond the scope of the original disclosure of the instant application the new matter rejection and lack of enablement rejection are not held to be maintained on legally insufficient grounds.

Note that Appellants statement that a high school student with basic understanding of plane geometry is not well received and is at best Appellants own opinion. Given the extent of the manipulation of the specification to arrive at the final equation and the fact that the art, as admitted by Appellant, is "highly sophisticated" (see page 11, lines 15-19), it is extremely unlikely that a high school student with basic understanding of plane geometry would remotely arrive at the final equations set forth in claim 44.

Appellant now states that the "gap" in Fig. 1 is "exaggerated" as is well known, however Appellant fails to state by whom this would be well known or to what degree it is well known. Further now Appellant states that this gaps is a negligible amount which explains why so little had to be said about it.

There is no clear basis in the original disclosure to support this allegation.

When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int 'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The disclosure gave no indication that the drawings were drawn to scale. "[I]t is well established that patent drawings do not define

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the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.”). However, the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. In *re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977) (“We disagree with the Solicitor’s conclusion, reached by a comparison of the relative dimensions of appellant’s and Bauer’s drawing figures, that Bauer clearly points to the use of a chime length of roughly 1/2 to 1 inch for a whiskey barrel.’ This ignores the fact that Bauer does not disclose that his drawings are to scale. ... However, we agree with the Solicitor that Bauer’s teaching that whiskey losses are influenced by the distance the liquor needs to traverse the pores of the wood’ (albeit in reference to the thickness of the barrelhead)” would have suggested the desirability of an increased chime length to one of ordinary skill in the art bent on further reducing whiskey losses.” 569 F.2d at 1127, 193 USPQ at 335-36.). Thus the gap size is not held to be clearly negligible or exaggerated based on the original disclosure.

Appellant’s statement that the presence or absence of an undimensioned “gap” in Fig. 1 is irrelevant. Yet again there is no clear basis for this in the original disclosure and is only described as being negligible, exaggerated or irrelevant in Appellant’s Brief.

Since the relationship of $d_0 = d_{113}$ - a takes into account this gap wherein the target does not exist, the gap does affect the degree of taper since it represents a space wherein the target does not exist. Further since the specification does not define the gap remotely in the capacity that Appellant relies in the Brief, one cannot assume that

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this gap is negligible and thus would materially affect the equation of $d_0 = d_{113} - a$ in order to determine the taper of the target.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Gregg Cantelmo
Patent Examiner
Art Unit 1745


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Supervisory Patent Examiner
Technology Center 1700

April 30, 2003

Conferees

Patrick J. Ryan - Supervisory Patent Examiner for Art Unit 1745


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